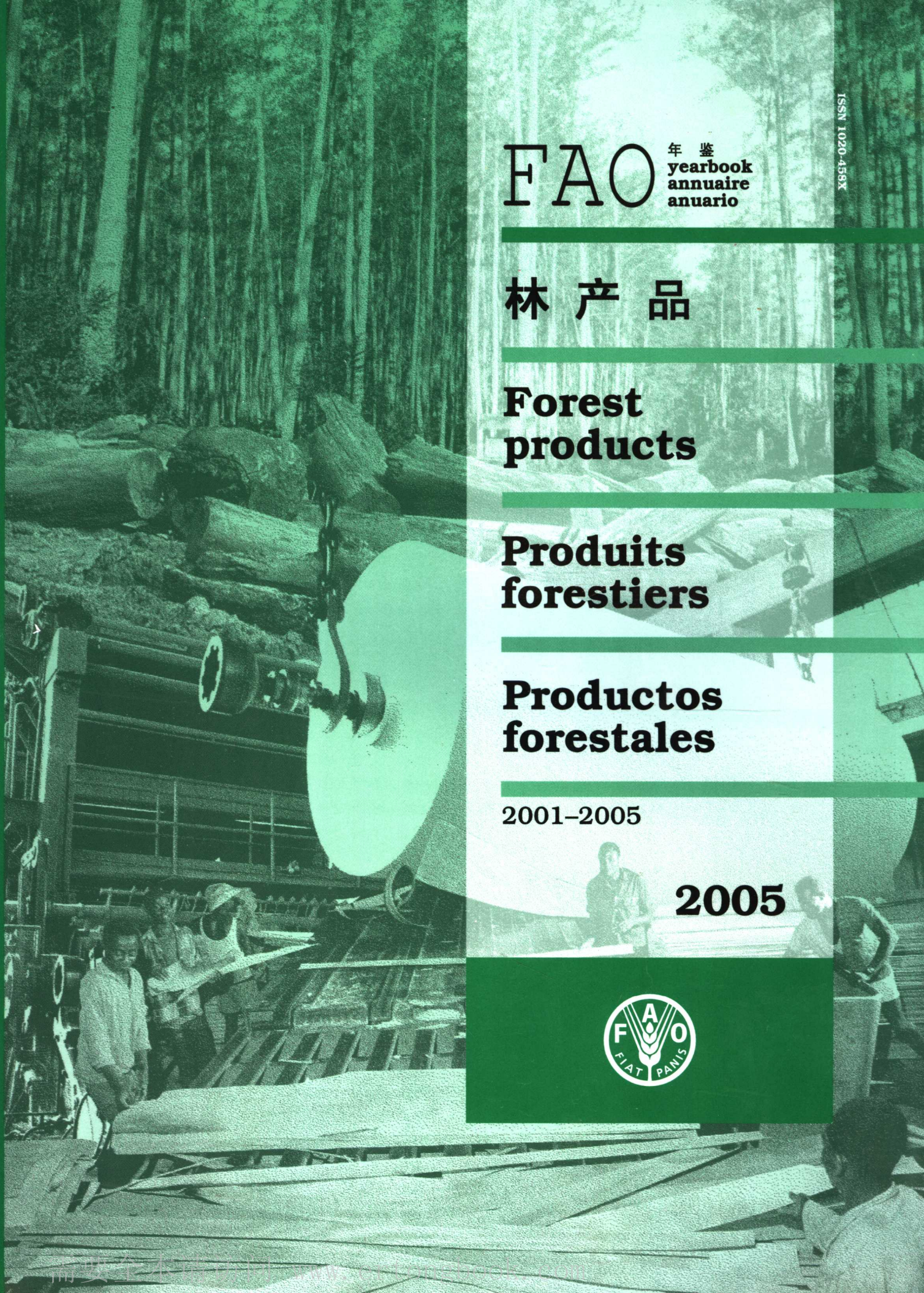


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林产品

Forest products

Produits forestiers

Productos forestales

2001–2005

2005

粮农组织林业丛书
第 40 号
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林产品

Forest products

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联合国
粮食及
农业组织
2007 年，罗马

FOOD
AND AGRICULTURE
ORGANIZATION
OF THE
UNITED NATIONS
Rome, 2007

ORGANISATION
DES NATIONS UNIES
POUR
L'ALIMENTATION
ET L'AGRICULTURE
Rome, 2007

ORGANIZACIÓN
DE LAS
NACIONES UNIDAS
PARA
LA AGRICULTURA
Y LA ALIMENTACIÓN
Roma, 2007

粮农组织林产品年鉴

前 言

这是第59期《粮农组织林产品年鉴》。本《年鉴》包括2001—2005年每年的林产品生产和贸易数据以及2004和2005年的贸易流向数据。可通过下列电子形式获得从1961年开始的所有林产品时间序列数据：光盘（粮农组织统计数据共用数据库光盘）和下列因特网址：http://apps.fao.org/forestry/site/29420/en。如欲了解关于获得其中任何信息产品的情况，请与下列网址联系：publications-sales@fao.org，或者通过下列因特网址：http://www.fao.org/icatalog/search/result.asp?subcat_id=150。

请注意本《年鉴》格式的变化。为了提供更多林业资料并向成员国提供最好的服务，粮农组织在本《年鉴》中扩大语言范围，包括阿拉伯文和中文。每年将有更多的内容以这两种语言提供。

各国政府以答复调查表的形式提供了大部分资料，在它们的合作下，本《年鉴》才得以出版。本《年鉴》因一些国际组织在收集森林部门统计资料方面扩大合作而受益。从1999年开始，利用一份联合林产品调查表收集1998年生产和贸易数据及1997年的更新数据，该调查表得到粮农组织林业部、欧洲经济委员会、欧洲共同体统计处和国际热带木材组织的支持。这一联合调查表是根据所有四个伙伴组织的成员国为了使我们的森林部门数据收集和传播方法合理化而提出的要求提供的。希望这将减轻各国的报告负担，增加答复率，增强各机构发表的林业统计出版物之间的一致性。

本《年鉴》表格分三个部分。第一部分包括关于2005年就林产品产量、消费量和贸易量而言最重要的国家的资料。第二部分包括报告每个国家和每种林产品的产量、消费量和贸易量以及贸易总值和单位贸易值的主要表格。第三部分所包括的表格表明主要产品类别的双边贸易流向。

第二部分表格提供2001—2005年五年的数据。对任何林产品，表格是按照该产品的产量、进口量和出口量数据依次编排的。由于产品的产量和贸易统计的细分类方法不同，某些产品类别系列仅包括产量统计数，而另一些则仅有贸易统计数。一般来说，原木的表格之后为成材、人造板产品、纸浆及纸的表格，依次排列。在这些分类中，把同一类的所有产品汇总表放在前面，然后是单项产品表。

贸易流向表列出了一些主要贸易林产品中每种林产品的15个最大出口国和25个最大进口国的资料。所列的资料为最近两年的数据，依据对各国通过联合调查表所提供的数据的分析并来源于联合国统计局商品贸易数据库的数据。作为粮农组织努力扩大其统计工作范围的一部分，不久还将在粮农组织统计数据库的因特网址上，以电子形式提供更加全面的各国贸易流向统计数据。

下面给林产品和林产品总称下了简单的定义，在这一节中，林产品总称和单项林产品按其在《年鉴》中出现的次序排列。这些定义依据《林产品的分类与定义》（粮农组织，1982年，罗马）中所下的定义。在本期《年鉴》中对产品定义和分类作了一些调整，以便符合联合林产品调查表的所有伙伴的需要及避免某些林产品类别可能出现的重复计算。在这一节的最后有一个表格，列出产品总称的产量、消费量和贸易量构成情况。关于进出口产品，该节的最后部分也有一个表格，列出林产品名称及在联合国《国际贸易标准分类》（SITC）系统和世界海关组织协调的系统（HS）中所使用的相关数字码。

这些表格引用了粮农组织统计数据库中的林产品数据。因此，这些表格对林产品名称采用计算机制作的标号，以代表地理实体。在该节最后部分的一个表格中列出了计算机制作的大陆、国家和地区名称标号清单。

同以前几期《年鉴》一样，本期《年鉴》包括粮农组织的估计数以及除官方对调查表的答复以外从其它来源得到的数据。五年序列数据包含官方修改数和其它来源的新资料。因此，在汇编这些数据的过程中，可能对以前几期《年鉴》中公布的数字作了修正。在某些情况下，一些国家提供的数据所采用的单位或度量制与本《年鉴》中所采用的不同。在编写本《年鉴》时，有必要把这些度量单位换算成标准公制单位。该节最后部分的一个表格列出了换算成公制所使用的系数。希望各国将重新核实这些数字，并在这些数字有误时向粮农组织提供更准确的数字。

木质燃料属于各国很少报告统计的领域之一。因此，粮农组织必须估计许多国家的木质燃料产量。最近，粮农组织运用了新的、被认为能提供更可靠的估计数的木质燃料消费模型，修订了追溯至1960年的各国木质燃料产量整套数据系列。，这些新的估计数，就某些国家而言，与原先的估计数存在很大差异。

本《年鉴》还包括列出五年汇率数据序列的一个表格。这一表格列出了在贸易值表格中将当地货币单位换算成共同货币（美元）时所使用的汇率。产量和贸易量数据按四舍五入计算，以1 000为单位；关于木炭、纸浆和纸产品的数量（包括每千人的表面净消费量）以公吨表示，其它所有产品以立方米表示。如果一个国家或地区名称后面没有数字或者有“零”，说明其数量还不到500个单位。区域总数和世界总数中列出了500个单位以下的数量，尽管未在国家一级列出。

在没有官方统计数的情况下，用符号表明使用了粮农组织的估计数（F）或非官方来源的数据（*）。在产品表中对单项产品如胶合板等使用（F）和（*）符号，但在产品总称如木质板等未采用这些符号。

为了改进这些数据序列，读者如果发现数据与公认或权威性数据来源的数据不同或者任何数据尽管来自官方，但看来没有意义，请与粮农组织联系。粮农组织希望报告准确及时的数据，并寻求所有国家的帮助以促进关于林产品产量和国际贸易的高质量统计资料的汇编和传播。下面提供了与粮农组织负责本《年鉴》每个部分的人员联系的详情。Forest Products and Industry Division, FAO Forestry Department, Viale delle Terme di Caracalla, 00100 Rome, Italy. 传真：+39-06-5705.5137 或 +39-06-5705.3945；电子邮件：关于一般意见 FOIM-OIC@fao.org；关于产量统计数 mauro.paolozzii@fao.org；关于贸易统计数：carlos.dricco@fao.org；关于进入粮农组织统计数据库 felice.padovani@fao.org。

表格中使用的符号

CUM	立（方）米
MT	公 吨
C	针 叶
NC	非针叶
F	粮农组织的估计数
*	非官方数字
$	美 元

产品名称及定义

本《年鉴》中使用的一般术语和产品名称列述如下，并进行简单的定义。所用定义尽可能采用《林产品的分类和定义》（粮农组织，罗马，1982 年）的定义。对其中某些定义作了修改供联合林产品调查表使用。

一般术语

针 叶

指从植物学分类为“裸子植物”的树木获得的所有木材，例如冷杉、南美杉、雪松、银杏、落叶松、云杉、松属等（这些木材一般都称作软材）。

非针叶

是指从植物学分类为“被子植物”的树木获得的所有木材，例如槭属、栎木属、柿属、山毛榉属、愈疮木属、杨属、栎属、柳安、柚木、木麻黄等（这些木材一般都称作阔叶树材或硬材）。

热 带

《国际热带木材协定》（1994 年）对热带木材定义如下：“南北回归线之间国家生长或生产的工业用热带非针叶木材。该术语包括原木、成材、单板和胶合板。这一定义还应包括含有来源于热带的针叶树的胶合板。”本书中使用这一术语仅用于工业用非针叶原木。

其 它

非热带国家（按上面定义）。本文中使用这一术语仅用于工业用非针叶原木。

采伐量

从森林、其它林地或其它采伐点采伐并运走的所有活树或死树的数量。**包括**：自然损耗中回收（即采集）的数量，一年中早些时候砍伐的木材的采运量，树桩和树枝（如果采集的话）等非树干采运量，因自然原因（即自然损耗）如火灾、刮风、病虫害等而死亡或损坏的树木的采运量。**不包括**：树皮和其它非木质生物量及树桩、树枝和树梢（如果未采集的话）等未采运的任何木材和伐木损耗。以立方米内皮（不包括树皮）为单位公布。如按外皮计算（即包括树皮），数量需要下调，换算成内皮估计数。

产 量

所有产品产量的实积或重量说明如下。**包括**：可以立即用于加工另一种产品（例如木浆可以立即继续加工成纸张）的产品的产量。**不包括**：在国内用于生产胶合板的单板的产量。关于原木、锯材和人造板，以实积立方米为单位公布，而木炭、纸浆和纸产品则以公吨为单位公布。

进 口

运入国内供消费或加工的产品。**包括**：在某些情况下供再出口的进口量。**不包括**：“运输途中”的装运量。以实积立方米或公吨为单位公布，价格通常包括成本、保险费加运费价（即到岸价格）。

出 口

运往国外的本国出产或加工的产品。**包括**：在某些情况下供再出口的产品。**不包括**：“运输途中”的装运量。以实积立方米或公吨为单位公布，价格通常是离岸价格。

单位值

贸易总值除以贸易总量得出单位值。出口值为离岸价格平均值，而进口值则为到岸价格平均值。

消 费

消费指表面净消费，等于产量加进口量减出口量；因此只有当所有这三项数据都得到之后才能计算消费量。

林产品总称和名称

以下按后面表格出现的次序列出单项林产品和林产品总称的名称。这里未对针叶材和非针叶材进行单独定义，因为前面的一般定义在这里适用。除非另有说明，每个林产品类别均包括针叶材和非针叶材。该节最后部分的一个表格概述了所有产品类别和总称如何联系起来的情况。

原 木

原 木

原木（针叶）

原木（非针叶）

砍伐或用其它方法采伐和采运的所有原木。包括从采运获得的所有木材，即从森林和森林外树木采运的数量，其中包括在这一时期、日历年度或森林年度从自然损耗、伐木和采运损耗中回收的木材。**包括**：已去皮或未去皮的所有木材，其中包括圆形、块状、大致成方形或者其它形状（例如树枝、树根、树桩和树瘤等）（如果采集的话）的木材和大体成形或削尖的木材。**产量统计数为以下各项的合计数**：木质燃料，包括木炭材；锯材原木和单板原木；制浆木材，圆形和块状；其它工业用原木。**贸易统计数为以下各项的合计数**：工业用原木 – 未加工木材；木质燃料，包括木炭材。以立方米去皮（即不包括树皮）为单位公布。统计数包括记录的采集以及在说明中表明的未记录的估计采集量。

木质燃料，包括木炭材

木质燃料，包括木炭材（针叶）

木质燃料，包括木炭材（非针叶）

用来作为燃料（如用于煮饭、取暖或动力生产）的原木。**包括**：从树干、树枝和树的其它部位采集的木材（如果采集它们用作燃料）和用于木炭生产（例如用于坑窑和移动炭窑）的木材。关于用于木炭生产的原木估计数，用 6.0 的系数由生产的木炭重量单位（公吨）转换成用于生产的原木的实积单位（立方米）。以立方米去皮（即不包括树皮）为单位公布。

工业用原木 — 未加工木材

工业用原木 — 未加工木材（针叶）

工业用原木 — 未加工木材（非针叶）

工业用热带原木 — 未加工木材 (非针叶)

工业用其它原木 — 未加工木材（非针叶）

用于产生其它产品和服务（用作燃料来源除外）的原木。**包括**：除木质燃料以外的所有原木。**产量统计数为以下各项的合计数**：锯材原木和单板原木；纸浆材，圆形和块状；工业用其它原木。这个类别的贸易统计数仅分成针叶和非针叶（非针叶进一步分成热带和非热带非针叶）。以立方米去皮（即不包括树皮）为单位公布。

锯材原木和单板原木

锯材原木和单板原木（针叶）

锯材原木和单板原木（非针叶）

纵向锯制（或切削制）加工为成材或铁道枕木或用于加工成单板（主要用旋切或刨切的方法）的原木。**包括**：用于这些目的的原木（无论是否大致成方形）；木瓦短原木和桶板短原木；火柴短木段和用于加工成单板的其它特殊原木（如树瘤、树根等）。以立方米去皮（即不包括树皮）为单位公布。

纸浆材，圆形和块状

纸浆材，圆形和块状（针叶）

纸浆材，圆形和块状（非针叶）

用于加工木浆、碎料板或纤维板的原木。**包括**：用于这些目的的圆形或作为对开材或者从原木直接加工成木片（即在森林内）的原木（带皮或去皮）。以立方米去皮（即不包括树皮）为单位公布。

其它工业用原木

其它工业用原木（针叶）

其它工业用原木（非针叶）

在森林加工部门之外用于产生其它产品和服务（燃料来源除外）的原木。**包括**：用于栲胶、蒸馏、制造火柴、产生煤气、电杆、桩木、支柱和坑木等原木。以立方米去皮（即不包括树皮）为单位公布。

木炭、木片、碎料和剩余物

木 炭

因部分燃烧或外部热源而炭化的木材。**包括**：用来作为燃料或其它用途，例如作为冶金业中的还原物或者作为吸收或过滤工具的木炭。以公吨为单位公布。

木片和碎料

在制造其它木材产品时特意加工成碎片并适用于制浆、制造碎料板和纤维板、用作燃料或其它用途的木材。**不包括**：直接（即在森林内）从原木加工成木片（即已经作为圆形或块状的制浆木材统计）。以不包括树皮的实积立方米为单位公布。

木材剩余物

森林加工业中林产品加工之后剩下的原木材积（即森林加工剩余物）和未加工成木片或碎料的原木材积。**包括**锯木厂的下脚料、板皮、边条和截头、单板原木的芯板、废单板、锯末、木工和细木工的剩余物等。**不包括**：从原木直接（即在森林内）制成的木片，或从剩余物制成的木片（即已经作为圆形或块状的纸浆材或者木片和碎料统计）。以不包括树皮的实积立方米为单位公布。

锯 材

锯 材

锯材（针叶）

锯材（非针叶）

从国内生产和进口的原木中通过纵向锯制或剖面切削的方法加工的厚度超过 5 毫米（有少数例外）的成材。**包括**：以未刨光、刨光、开槽、榫接、指接、倒棱、槽口接合、V 形接合、珠椽等形式的厚板、梁、托梁、板材、椽、小方材、板条、箱板、枕木和“方材”等。**不包括**：地板材。以实积立方米为单位公布。

人造板

人造板

人造板是一个总称。**产量和贸易统计数为以下各项的合计数**：单板、胶合板、碎料板和纤维板。在 1995 年之前，纤维板还分成压缩纤维板和未压缩纤维板。从 1995 年开始，压缩纤维板一类合并到硬质和中密度纤维板；非压缩纤维板重新标为绝缘板。以实积立方米为单位公布。

单 板

用旋切、刨切或锯开的方法加工厚度均匀的薄板。**包括**：用于制造胶合板、层积建筑材料、家具、单板容器等的木材。**不包括**：国内用于制造胶合板的木材。以实积立方米为单位公布。

胶合板

胶合板是将单板粘合一起的相邻单板的纹理一般相互成直角的胶合板板料。单板通常平衡地放在本身可能由一块单板或另外一种材料制成的一块中板的两边。**包括**：***单板胶合板***（用两层以上的单板粘合在一起制成的胶合板，相邻单板的纹理一般相互成直角）；***厚芯胶合板***或***芯板***（即中间层一般比其它层厚的实芯的胶合板，由并排的窄板、短木块或木条组成，可以胶合在一起，也可以不胶合在一起）；***蜂窝板***（芯板为蜂窝结构的胶合板）；***复合胶合板***（一种芯板或几层除实积板或单板以外的材料组成的胶合板）。**不包括**：层积建筑材料（如胶合层积材），其单板纹理一般为同一方向。以实积立方米为单位公布。

碎料板

碎料板是由小木片或其它木质纤维素材料（如削片、刨花、木片、细木丝、碎条、碎片等），用一种有机粘合剂结合下列一种或几种因素，如加热、加压、湿度、某一催化剂等粘结而成的。**包括**：薄板；定向细木丝板和亚麻碎料板。**不包括**：无机粘合剂制成的木丝板及其它碎料板。以实积立方米为单位公布。

纤维板

纤维板是用木板纤维或其它木质纤维素材料制成，主要靠纤维结合力及其内在粘性而粘接的（尽管在加工过程中可加入粘合剂和/或添加剂）。**包括**：平压和成形纤维板产品。**产量和贸易统计数为以下几项的合计数**：硬质纤维板；中密度

需要全本请访问 www.ertongbook.com

纤维板；绝缘板。以实积立方米为单位公布。

硬质纤维板

硬质纤维板的密度超过 0.80 克/立方厘米。在 1995 年之前，硬质纤维板是压缩纤维板产品类中的一个成分，因此 1994 年和以前没有硬质纤维板数据。不包括：用木片、木粉或其它木质纤维素材料与添加粘合剂制成的类似产品；由石膏或其它矿物材料制成的板材。以实积立方米为单位公布。

中密度纤维板

中密度纤维板的密度介于 0.5 克/立方厘米与 0.8 克/立方厘米之间。1995 年之前，中密度纤维板是压缩纤维板产品类中的一个成分，因此 1994 年及以前没有这个产品的数据。以实积立方米为单位公布。

绝缘板

绝缘板的密度不超过 0.5 克/立方厘米。1995 年之前，绝缘板属于非压缩纤维板类。以实积立方米为单位公布。

木浆和回收纸

木 浆

由制浆木材、木片、碎料、剩余物或回收纸通过机械和/或化学过程制成的纤维材料，可进一步加工成纸、纸板、纤维板或其它纤维素产品。**产品和贸易统计数为以下各项的合计数**：机械木浆；半化学木浆；化学木浆；溶解木浆。以公吨气干重量（即 10%水分）为单位公布。

机械木浆

通过把制浆木材或剩余物研磨成纤维，或通过精磨木片或碎料等方法获得的木浆。这种木浆也叫磨木浆和精磨木浆，可以是漂白的或未漂白的。包括：化学机械木浆和热机械木浆。以公吨气干重量（即 10%水分）为单位公布。

半化学木浆

通过对制浆木材、木片、碎料或剩余物进行一系列机械和化学处理而制成的木浆，只用其中的一种处理方法不足以使纤维分开。可以是漂白的或未漂白的。包括：半化学木浆；化学磨木浆；化学机械木浆等（名称按加工过程期间处理的重要程度排列）。以公吨气干重量（即 10%水分）为单位公布。

化学木浆

对制浆木材、木片、碎料或剩余物进行一系列化学处理而制成的木浆。包括：硫酸盐木浆；碱法木浆；亚硫酸盐木浆。可以是漂白、半漂白或未漂白的。不包括：溶解木浆。以公吨气干重量（即 10%水分）为单位公布。凡有详细资料，均列出下列四种木浆的统计数：未漂白的亚硫酸盐浆；漂白的亚硫酸盐浆；未漂白的硫酸盐浆；漂白的硫酸盐浆。

未漂白的亚硫酸盐浆
漂白的亚硫酸盐浆

这种木浆是用机械方法把制浆木材、木片、碎料或剩余物加工成小片，然后用一种酸性亚硫酸盐蒸煮液在压力容器内蒸煮而制成的。这一过程通常用铵、钙、镁和钠这类亚硫酸氢盐溶液。不包括溶解浆。以公吨气干重量（即 10%水分）为单位公布，数据分成两类：漂白浆（包括半漂白浆）和未漂白浆分开统计。

未漂白的硫酸盐浆
漂白的硫酸盐浆

这种木浆是用机械方法把制浆木材、木片、碎料或剩余物加工成小片，然后用氢氧化钠煮液（碱法木浆）或氢氧化钠和硫化钠的混合蒸煮液（硫酸盐浆）在压力容器内蒸煮而制成的。不包括溶解浆。以公吨气干重量（即 10%水分）为单位公布，数据分成两类：漂白浆（包括半漂白浆）和未漂白浆分开统计。

溶解木浆

用特殊质量木材制成的化学木浆（硫酸盐浆、碱法木浆或亚硫酸盐浆），阿尔法纤维素含量很高（通常含 90%以上）。这种木浆都是漂白的，适宜除造纸以外的其它用途。主要是作为纤维素用来制造人造纤维、纤维塑料、氢气、炸药等各种产品。以公吨气干重量（即 10%水分）为单位公布。

其它纤维浆

用除木材以外的植物纤维材料制成的纤维浆，用于制造纸张、纸板和纤维板。包括由稻草、竹子、蔗渣、茅草、其它芦苇或草类、短棉绒、亚麻、大麻、破布、其它纺织品剩余物制成的浆。不包括由回收纸制成的浆。以公吨气干重量（即 10%水分）为单位公布。

回收纸

为了重新用来作为制造纸张和纸板的原料而收集的废纸和碎纸片或纸板。包括：已用于其原来用途的纸张和纸板及纸张和纸板生产过程中产生的剩余物。以公吨为单位公布。

纸和纸板

纸和纸板

纸和纸板是一个总称。**产量和贸易统计数为以下各项的合计数**：新闻纸、印刷纸、书写纸、其它纸张和纸板。这类产品一般制成宽度超过 15 厘米（就统一标准 48.13 和 48.19 而言，则为 36 厘米）条状或卷状产品，或者制成一边超过 36 厘米、另一边超过 15 厘米的展开的长方形薄层。不包括加工成纸箱、纸板、书籍和杂志等的纸产品。以公吨为单位公布。

新闻纸

非涂料纸，未施胶（或少量施胶），至少含 60%的机械木浆（即纤维的百分比含量），通常每平方米的重量不少于 40 克，一般不超过 60 克，主要用来印刷报纸。以公吨为单位公布。

除新闻纸以外的纸和纸板

纸和纸板是一个总称。包括：其它印刷纸和书写纸、其它纸和纸板。仅在贸易流向表格中出现。以公吨为单位公布。

印刷纸和书写纸

除新闻纸以外的纸张，适用于印刷和商业用途、书写、制图、绘画等。用各种混合浆制造并经过各种研磨。包括：用于书籍和杂志、裱墙原纸、纸箱衬里和糊面用纸、计算机用纸、凹板印刷纸、拓印纸或贴图纸、标签纸、平板印刷纸、支票纸、表格纸、典籍或仿典籍、信纸、复写纸、葱皮纸、打字纸、招贴纸等。以公吨为单位公布。

其它纸和纸板

所有其它各种纸。**包括**：建筑用纸和纸板、家庭用纸和卫生纸、特薄纸、包裹和包装纸、纸板、未列入其它项的纸和纸板。以公吨为单位**公布**。凡有详细资料，均列出以下三类的统计数：家庭用纸和卫生纸、包裹和包装纸及纸板、未列入其它项的纸和纸板。

家庭用纸和卫生纸

由漂白或未漂白的化学木浆（有时用废纸制的浆和机械浆的混合浆）制造的吸水纸（绉纸或非绉纸和有时压花纸）。**包括**：毛巾纸、餐巾纸、擦面纸、手纸、妇女卫生纸和一次性用纸等。以公吨为单位**公布**。

包裹和包装纸及纸板

用于包裹、包装和制造纸袋及纸箱的纸和纸板。**包括**：植物羊皮纸、防油纸和透明纸（*用纯化学木浆或化学木浆与棉花纤维浆混合制成，如高度水化或重力打浆，以便防油和防水，主要用来包装黄油、人造黄油、肉类或鱼类等冷冻、有水分或带油脂的物品*）；面料纸板（*这种纸或纸板用于瓦楞或实心的纸或纸板箱和各种容器的贴面材料*）；瓦楞原纸（*将纸和纸板制成瓦楞纸板时，用这种纸或纸板作为中间层的原料*）；牛皮纸袋纸（*用硫酸盐浆制造的结实的牛皮纸，用来作单层或多层的纸袋*）；其它牛皮包裹纸（*主要用硫酸盐浆制造的所有其它包裹和包装用纸*）；折叠箱纸板（*用于制造折叠箱的各类纸板*）；其它各种包裹和包装纸及纸板。以公吨为单位**公布**。

未列入其它项的纸和纸板

用于建筑、特别用途和其它用途的未列入其它项的纸和纸板。**包括**：*用于涂蜡、涂沥青、防水、层压、浸渍、纺或捻、涂胶等用途的*牛皮纸；主要由除硫酸盐浆以外的浆料制成的而又未列入其它项的纸（*如纸绳和黄麻纸、文件夹纸、吸墨纸、过滤纸、相片感光纸等*）；建筑用纸和纸板（*修建房屋及其它建筑时所使用的纸、纸砖和纸板，用作绝缘、蒸气密封、屋顶铺垫和地面衬底等(这些纸一般由木浆、废纸、其它植物浆和矿物纤维等经过充分精磨的材料制成，其主要特点是：导热率低、防潮、防火、耐久、抗虫蛀)*）；特薄纸（*为特殊用途制造的纸，这种纸的共同点是比较薄，是用未漂白或漂白的机械木浆或化学木浆制成的，通常是由含有亚麻、大麻和棉花纤维的纸浆制成的，其中一些纸的主要特点是：表面和厚度很均匀，没有砂眼，强度大，构造紧密，不透明，渗透性低，化学纯净；这类纸包括：碳化纸、电容器纸、卷烟纸、擦镜纸、图样纸和茶叶包装纸*）；未列入其它项的纸板（*如鞋底用纸板、电圈纸板、变压器用纸板、纺织压榨纸板、索引卡片压榨纸板、车身面板、行李箱和手提箱纸板、矩阵板*）。**不包括**：经过浸渍、饱和、层压或用任何方法进一步加工的纸、纸张和纸板，以及绝缘、半硬质和硬质的纤维板或建筑纤维板。以公吨为单位**公布**。

表格说明

生产和贸易

原木

工业用原木

有些国家的工业用原木产量的统计资料无法获得，因而其产量是按产品数量折算成原木等量进行估算。由于在生产和贸易统计资料中所使用的林产品定义不同，因此无法计算工业用原木总量中所包括的单项林产品消费量。在 1988 年，关税合作委员会（现在改为世界海关组织）的一些成员国在其贸易统计中采用修订后的产品分类法，即协调的商品描述和编码系统（HS）。此分类法已被第三次修订的联合国国际贸易标准分类（SITC Rev.3）所采用。尽管对大多数林产品而言，这是从先前的分类简单地转换一下，但就工业原木而言，未就锯材原木、单板原木、纸浆材和其它工业用原木进行细分。因此，未列出这些产品的贸易表格。未充分列出原木产量数据表明一些国家存在负消费（即这是一个统计上的问题）。未列出部分在区域总数和世界总数中列出。

木质燃料，包括木炭材和木炭

许多国家没有每年报告木质燃料和木炭产量。这些产品产量被认为在许多国家相当大，而且，这些统计数据需要用来计算原木总产量。因此，粮农组织估计木质燃料和木炭产量。这些估计目前以与一些其它变量相关的木质燃料和木炭消费量统计模型为基础。这些变量包括人口、收入、城乡人口分布、森林覆盖、原油产量、气温和土地面积。用于作出这些估计的模型的全部详细内容可见粮农组织因特网址上的全球森林产品展望研究网页。就某些国家而言，这些新的估计数与原先的估计数差异很大。然而，用于作出这些新的估计的模型被认为能够提供比过去更加可靠的估计数。如同过去一样，根据该模型估计的而不是由各国提供的产量统计数据，在粮农组织统计数据库（FAOSTAT）中带有“F”标志。

人造板

单 板

一些报道的单板产量包括本国为制造胶合板生产的单板。在可能的情况下，粮农组织试图修正这些统计数。

纤维板

一些国家对林产品调查表的答复中有时未区分各类纤维板产量。在这种情况下，仅报告纤维板总产量。然而，在可能的情况下，分别列出各类纤维板产量。

贸易流向

报告的贸易流向资料为最近两年的资料。这些表格是根据对于各国在联合林产品调查表中所提供的资料的分析以及根据联合国统计局商品贸易数据库的数据编制的。当未用标准单位报告贸易量时，采用了标准转换系数。当贸易量与贸易值不一致时，根据平均单位值对贸易量重新估计。如果没有出口国的报告，则根据进口国的报告估计它们的出口量。在本《年鉴》中，由于根据联合国统计局商品贸易数据库的数据和调查表的资料作了调整，贸易流向项下报告的贸易量可能与《年鉴》主要表格中所列的数据有所不同。

价值单位

贸易值表中采用的单位是美元。有关贸易单位值表中的数据，根据不同商品为每立方米美元或每吨美元。

国家注释

某些国家没有向粮农组织报告统计数据，或只是报告了部分统计数据。在这种情况下，就采用国家年鉴、各种报道或非官方出版物中的资料。贸易估计数则是根据其贸易伙伴提供的资料提出的。

以下是对某些国家的说明：

比利时、卢森堡

产量和贸易数均合计在“比利时－卢森堡”栏内。

中 国

数据包括中国台湾省，香港特别行政区和澳门特别行政区。

加拿大和美利坚合众国

关于加拿大和美利坚合众国，采用每 1 000 板英尺 2.36 立方米的转换系数将以 1 000 板英尺为单位报告的成材材积换算成立方米。这些国家的锯材加工标准一般导致实际生产材积低于名义生产材积。针叶锯材数据从名义到实际的转换是用转换系数 0.7203 乘以名义数据。这些转换在 FAO 统计数据库(FAOSTAT)中由'*'标识。1995 年之后美利坚合众国的碎料板产量数据仅包括定向刨花板。

产品总称构成

产品	单位	总称：原木	原木(针叶)	原木(非针叶)	木质燃料，包括木炭材	工业用原木-未加工木材	工业用原木-未加工木材(针叶)	工业用原木-未加工木材(非针叶)	锯材原木和胶合板材	纸浆材，圆形和块状	其它工业用原木	锯材	人造板	纤维板	木浆	化学木浆	纸和纸板	其它纸和纸板	林产品值
		CUM	CUM	CUM	CUM	CUM	CUM	CUM	CUM	CUM	CUM	CUM	CUM	CUM	MT	MT	MT	MT	US$
		P,I,E,C	P	P	P,I,E,C	P,I,E,C	P,I,E,C	P,I,E,C	P	P	P	P,I,E,C	P,I,E,C	P,I,E,C	P,I,E,C	P,I,E,C	P,I,E,C	P,I,E,C	I,E
木质燃料，包括木炭材	CUM	i,e			i,e														i,e
木质燃料，包括木炭材（针叶）	CUM	p	p		p														
木质燃料，包括木炭材（非针叶）	CUM	p		p	p														
锯材原木和单板原木（针叶）	CUM	p	p			p	p		p										
锯材原木和单板原木（非针叶）	CUM	p		p		p		p	p										
纸浆材，圆形和块状（针叶）	CUM	p	p			p	p			p									
纸浆材，圆形和块状（非针叶）	CUM	p		p		p		p		p									
其它工业用原木（针叶）	CUM	p	p			p	p				p								
其它工业用原木（非针叶）	CUM	p		p		p		p			p								
工业用原木－未加工木材（针叶）	CUM	i,e				i,e	i,e												i,e
工业用热带原木－未加工材（非针叶）	CUM	i,e				i,e		i,e											i,e
工业用其它原木－未加工材（非针叶）	CUM	i,e				i,e		i,e											i,e
木炭材	MT																		i,e
木片和碎料	CUM																		i,e
木材剩余物	CUM																		i,e
锯材（针叶）	CUM											p,i,e,c							i,e
锯材（非针叶）	CUM											p,i,e,c							i,e
单板	CUM												p,i,e,c						i,e
胶合板	CUM												p,i,e,c						i,e
碎料板	CUM												p,i,e,c						i,e
硬质纤维板	CUM												p,i,e,c	p,i,e,c					i,e
中密度纤维板	CUM												p,i,e,c	p,i,e,c					i,e
绝缘板	CUM												p,i,e,c	p,i,e,c					i,e
溶解木浆	MT														p,i,e,c				i,e
机械木浆	MT														p,i,e,c				i,e
半化学木浆	MT														p,i,e,c				i,e
未漂白亚硫酸盐浆	MT														p,i,e,c	p,i,e,c			i,e
漂白亚硫酸盐浆	MT														p,i,e,c	p,i,e,c			i,e
未漂白硫酸盐浆	MT														p,i,e,c	p,i,e,c			i,e
漂白硫酸盐浆	MT														p,i,e,c	p,i,e,c			i,e
其它纤维浆	MT																		i,e
回收纸	MT																		i,e
新闻纸	MT																p,i,e,c		i,e
印刷纸和书写纸	MT																p,i,e,c		i,e
家庭用纸和卫生纸	MT																p,i,e,c	p,i,e,c	i,e
包裹和包装纸及纸板	MT																p,i,e,c	p,i,e,c	i,e
未列入其它项的纸和纸板	MT																p,i,e,c	p,i,e,c	i,e

图例

总　称

P=产量
I=进口量
E=出口量
C=消费量 (P+I-E)

产　品

p=产　量
i=进口量
e=出口量
c=消费量 (p+i-e)

说明:

总称产量（P）等于该栏内标有（p）的所有各项产量总和。
总称进口量（I）等于该栏内标有（i）的所有各项进口量总和。
总称出口量（E）等于该栏内标有（e）的所有各项出口量总和。
总称消费量（C）只有在得到了该总称的产量（P）、进口量（I）和出口量（E）的数据之后才能计算。
消费量（c）只有在得到了该产品的产量（p）、进口量（i）和出口量（e）的数据之后才能计算。
进口总值（I）和出口总值（E）等于在各自栏内标明的进口值（i）和出口值（e）的总和。

国际贸易中的产品和产品总称：
协调系统（1996年）和国际贸易标准分类（第三次修订）对照表

产　　品	96年协调系统分类	国际贸易标准分类
原　　木	44.01.10 44.03.20/40/90	245.01 247.4　247.5
木质燃料，包括木炭材	44.01.10	245.01
工业用原木	44.03.20/40/90	247.4　247.5
工业用原木（针叶）	44.03.20	247.4
工业用原木（非针叶）	44.03.40　44.03.90	247.5
工业用热带原木（非针叶）	44.03.40 ex 44.03.99	247.51 ex 247.52
木炭材	44.02.00	245.02
木片和碎料	44.01.20	246.1
木材剩余物	44.01.30	246.2
锯　材	44.07	248.2 248.4
锯材（针叶）	44.07.10	248.2
锯材（非针叶）	44.07.20 44.07.90	248.4
人造板	44.08 44.10 44.11 44.12	634.1 634.22 634.23 634.3 634.4 634.5
单　板	44.08	634.1
胶合板	44.12	634.3 634.4
碎料板	44.10	634.22 634.23
纤维板	44.11	634.5
硬质板	44.11.10	634.51
中密度纤维板	44.11.20	634.52
绝缘板	44.11.30 44.11.90	634.53 634.59
木　浆	47.01 47.02 47.03 47.04 47.05	251.2 251.3 251.4 251.5 251.6 251.91
机械木浆	47.01	251.2
半化学木浆	47.05	251.91
化学木浆	47.03 47.04	251.4 251.5
未漂白亚硫酸盐浆	47.04.10	251.61
漂白亚硫酸盐浆	47.04.20	251.62
未漂白硫酸盐浆	47.03.10	251.4
漂白硫酸盐浆	47.03.20	251.5
溶解木浆	47.02	251.3
其它纤维浆	47.06	251.92
回收纸	47.07	251.1
纸和纸板	48.01/02/03/04/05/06/08/09/10/12/13 ex48.11.10 ex48.11.20 ex48.11.30 ex48.11.40 ex48.11.90	641.1/2/3/4/5/6 641.71/72/74/75/76/77 641.ex73/ex78/ex79 641.93 642.41
新闻纸	48.01	641.1
印刷纸和书写纸	48.02.10/20/30/50/60 48.09.10/20 48.10.10/20	641.21/22/23/25/26/27/29 ex641.31 641.32/33/34
其它纸和纸板	48.02.40 48.03 48.04.10/20/30/40/50 48.05.10/20/30/40/50/60/70/80 48.06.10/20/30/40 48.08 48.09.90 48.10.30/90 ex48.11.10 ex48.11.20 48.11.30 ex48.11.40 ex48.11.90 48.12/13	641.24 ex641.31 641.4/5/6 641.71/72/74/75/76/77 641.ex73/ex78/ex79 641.93 642.41
家庭用纸和卫生纸	48.03	641.63
包裹和包装纸及纸板	48.04.10/20/30/42/49/50 48.05.10/20/30/60/70 48.06.10/20/40 48.08 48.10.30/90 48.11.30	ex641.47 641.41/42/46/48 641.51/52/54/57/58 ex641.53 641.61/62/64/69 641.71/72/74/75/76/77
未列入其它项的纸和纸板	48.02.40 48.04.41 48.05.40/50/80 48.06.30 48.09.90 ex48.11.10 ex48.11.20 ex48.11.40 ex48.11.90 48.12/13	641.24 ex641.31 ex641.47 ex641.53 641.55/56/59 641.ex73/ex78/ex79 641.93 642.41

说明：

"ex"一词意味着两种编号之间并非完全相关，并且仅部分适用96年协调系统或国际贸易分类标准第三次修订。

在96年协调系统中，最后一个（第六个）数字0意味着所有细目包括在内：44.08.30包括44.08.31和44.08.39。

在国际贸易标准分类第三次修订中，如果仅列出四位数字，那么，下一位数的所有细目包括在内：634.1包括634.11和634.12。

(C) 针叶

(NC) 非针叶

国家、地区和大陆一揽表

计算机编制的标号	中　文
WORLD	**世　界**
AFRICA	**非　洲**
Algeria	阿尔及利亚
Angola	安哥拉
Benin	贝　宁
Botswana	博茨瓦纳
Burkina Faso	布基纳法索
Burundi	布隆迪
Cameroon	喀麦隆
Cape Verde	佛得角
Cent Afr Rep	中非共和国
Chad	乍　得
Comoros	科摩罗
Congo, Dem R	刚果民主共和国
Congo, Rep	刚果共和国
Cote Divoire	科特迪瓦
Djibouti	吉布提
Egypt	埃　及
Eq Guinea	赤道几内亚
Eritrea	厄立特里亚
Ethiopia	埃塞俄比亚
Gabon	加　蓬
Gambia	冈比亚
Ghana	加　纳
Guinea	几内亚
Guineabissau	几内亚比绍
Kenya	肯尼亚
Lesotho	莱索托
Liberia	利比里亚
Libya	阿拉伯利比亚民众国
Madagascar	马达加斯加
Malawi	马拉维
Mali	马　里
Mauritania	毛里塔尼亚
Mauritius	毛里求斯
Morocco	摩洛哥
Mozambique	莫桑比克
Namibia	纳米比亚
Niger	尼日尔
Nigeria	尼日利亚
Réunion	留尼汪
Rwanda	卢旺达
St Helena	圣海伦娜
Sao Tome Prn	圣多美和普林西比
Senegal	塞内加尔
Seychelles	塞舌尔
Sierra Leone	塞拉利昂
Somalia	索马里
South Africa	南　非
Sudan	苏　丹
Swaziland	斯威士兰
Tanzania	坦桑尼亚联合共和国
Togo	多　哥
Tunisia	突尼斯
Uganda	乌干达
Zambia	赞比亚
Zimbabwe	津巴布韦
N C AMERICA	**北美和中美洲**
Anguilla	安圭拉
Antigua Barb	安提瓜和巴布达
Bahamas	巴哈马
Barbados	巴巴多斯
Belize	伯利兹
Bermuda	百慕大
Br Virgin Is	英属维尔京群岛
Canada	加拿大
Cayman Is	开曼群岛
Costa Rica	哥斯达黎加
Cuba	古　巴
Dominica	多米尼加
Dominican Rp	多米尼加共和国
El Salvador	萨尔瓦多
Grenada	格林纳达
Guadeloupe	瓜德罗普
Guatemala	危地马拉
Haiti	海　地
Honduras	洪都拉斯
Jamaica	牙买加
Martinique	马提尼克
Mexico	墨西哥
Montserrat	蒙特塞拉特
NethAntilles	荷属安的列斯
Nicaragua	尼加拉瓜
Panama	巴拿马
St Kitts Nev	圣基茨和尼维斯
St Lucia	圣卢西亚
St Pier Mq	圣皮埃尔和密克隆
St Vincent	圣文森特和格林纳丁斯
Trinidad Tob	特立尼达和多巴哥
Turks Caicos	特克斯和凯科斯群岛
USA	美　国
SOUTH AMERIC	**南美洲**
Argentina	阿根廷
Bolivia	玻利维亚
Brazil	巴　西
Chile	智　利
Colombia	哥伦比亚
Ecuador	厄瓜多尔
Fr Guiana	法属圭亚那
Guyana	圭亚那
Paraguay	巴拉圭
Peru	秘　鲁
Suriname	苏里南
Uruguay	乌拉圭
Venezuela	委内瑞拉玻利瓦尔共和国

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计算机编制的标号	中　文
ASIA	**亚　洲**
Afghanistan	阿富汗
Armenia	亚美尼亚
Azerbaijan	阿塞拜疆
Bahrain	巴　林
Bangladesh	孟加拉国
Bhutan	不　丹
Brunei Darsm	文莱达鲁萨兰国
Cambodia	柬埔寨
China	中　国
Cyprus	塞浦路斯
Georgia	格鲁吉亚
India	印　度
Indonesia	印度尼西亚
Iran	伊朗伊斯兰共和国
Iraq	伊拉克
Israel	以色列
Japan	日　本
Jordan	约　旦
Kazakhstan	哈萨克斯坦
Korea D P Rp	朝鲜民主主义人民共和国
Korea Rep	大韩民国
Kuwait	科威特
Kyrgyzstan	吉尔吉斯坦
Laos	老挝人民民主共和国
Lebanon	黎巴嫩
Malaysia	马来西亚
Maldives	马尔代夫
Mongolia	蒙　古
Myanmar	缅　甸
Nepal	尼泊尔
Oman	阿　曼
Pakistan	巴基斯坦
Philippines	菲律宾
Qatar	卡塔尔
Saudi Arabia	沙特阿拉伯
Singapore	新加坡
Sri Lanka	斯里兰卡
Syria	阿拉伯叙利亚共和国
Tajikistan	塔吉克斯坦
Thailand	泰　国
Turkey	土耳其
Turkmenistan	土库曼斯坦
Untd Arab Em	阿拉伯联合酋长国
Uzbekistan	乌兹别克斯坦
Viet Nam	越　南
Yemen	也　门
EUROPE	**欧　洲**
Albania	阿尔巴尼亚
Andorra	安道尔
Austria	奥地利
Belarus	白俄罗斯
Belgium	比利时
Bel-Lux	比利时－卢森堡
Bosnia Herzg	波斯尼亚和黑塞哥维那
Bulgaria	保加利亚
Croatia	克罗地亚
Czech Rep	捷克共和国

计算机编制的标号	中　文
Denmark	丹　麦
Estonia	爱沙尼亚
Faeroe Is	费罗群岛
Finland	芬　兰
France	法　国
Germany	德　国
Gibraltar	直布罗陀
Greece	希　腊
Hungary	匈牙利
Iceland	冰　岛
Ireland	爱尔兰
Italy	意大利
Latvia	拉脱维亚
Lithuania	立陶宛
Luxembourg	卢森堡
Macedonia	前南斯拉夫马其顿共和国
Malta	马耳他
Moldova Rep	摩尔多瓦共和国
Netherlands	荷　兰
Norway	挪　威
Poland	波　兰
Portugal	葡萄牙
Romania	罗马尼亚
Russian Fed	俄罗斯联邦
Slovakia	斯洛伐克
Slovenia	斯洛文尼亚
Spain	西班牙
Sweden	瑞　典
Switzerland	瑞　士
UK	联合王国
Ukraine	乌克兰
Yugoslavia	南斯拉夫联盟共和国
OCEANIA	**大洋洲**
Amer Samoa	美属萨摩亚
Australia	澳大利亚
Cook Is	库克群岛
Fiji	斐济群岛共和国
Fr Polynesia	法属玻利尼西亚
Guam	关　岛
Kiribati	基里巴斯
Nauru	瑙　鲁
Newcaledonia	新喀里多尼亚
New Zealand	新西兰
Niue	纽　埃
Palau	帕劳
Papua N Guin	巴布亚新几内亚
Samoa	萨摩亚
Solomon Is	索罗门群岛
Tonga	汤　加
Tuvalu	图瓦卢
Vanuatu	瓦努阿图

编制产量和贸易表所使用的标准换算系数

单 位	公制等量
1 英寸	= 25.4 毫米
1 平方英尺	= 0.0929 平方米
1 立方英尺	= 0.02832 立方米
1 短吨	= 0.9072 吨
1 长吨	= 1.016 吨

林产品度量表

产品和单位	立方米	立方英尺	1 000 板英尺	标准材积
原 木				
1 霍普斯立方英尺	0.03605	1.273		
5 霍普斯立方尺的 1 吨	1.8027	63.66		
1 柯尼脱	2.83	100		
1 考得	3.625	128		
1 立方米[1]	1	35.315		
1 英寻	6.1164	216		
锯 材				
1 标准材积	4.672	165	1.98	1
1 000 板英尺/方英尺[2]	2.36	83.33	1	0.505
50 立方尺的 1 吨	1.416	50	0.6	0.303
人造板				
1 000 平方米 (1 毫米厚)	1	35.315	0.4238	
1 000 平方英尺 (1/8 英寸厚)	0.295	10.417	0.125	

[1] 虚积容积
[2] 见表格说明

林产品度量的近似等量

产品和单位	立方米	立方英尺
	去皮实积	
锯材原木和胶合板材		
1 000 板英尺/方英尺	4.53	160
纸浆材（圆形和块状）		
1 立方米	0.72	25.4
1 考得	2.55	90
木质燃料		
1 立方米	0.65	23
1 考得	2.12	74.9
1 000 层积立方英尺	18.41	650

重量和材积

产 品	公斤/立方米			立方米/公吨		
	普通	针叶	非针叶	普通	针叶	非针叶
木质燃料，包括木炭材	725	625	750	1.38	1.60	1.33
木 炭	167					
锯材原木和单板原木						
热 带			730			1.37
其 他		700	800		1.43	1.25
纸浆材 （圆形和块状）	675	650	750	1.48	1.54	1.33
其他工业用原木	750	700	800	1.33	1.43	1.25
锯 材		550	700		1.82	1.43
单 板	750			1.33		
胶合板	650			1.54		
碎料板	650			1.54		
硬质纤维板	950			1.053		
中密度纤维板				2		
绝缘板	250			4		

FAO YEARBOOK OF FOREST PRODUCTS

INTRODUCTION

This is the 59th issue of the *FAO Yearbook of Forest Products*. The yearbook contains annual data on the production and trade in forest products for the years 2001-2005 and on direction of trade in 2004 and 2005. The full forest products time series starting in 1961 is available in electronic form on compact disk (FAOSTAT CD) and on the Internet at: http://www.fao.org/forestry/site/29420/en. For information on acquiring any of these information products, contact publications-sales@fao.org or through the Internet at http://www.fao.org/icatalog/search/result.asp?subcat_id=150

Please note the change in format of the yearbook. In order to increase access to forestry information and best serve its member countries, FAO is expanding the language coverage provided in this yearbook to include Arabic and Chinese. Each year, more sections will be provided in these languages.

The publication of the yearbook is made possible by the cooperation of governments which supply most of the information in the form of replies to questionnaires. This edition benefits from expanded co-operation in gathering forest sector statistics among a number of the international organizations. Beginning in 1999, information for production and trade in 1998 and updates for 1997 were gathered using a joint forest products questionnaire supported by the Forestry Department of FAO, the Economic Commission for Europe (ECE), the Statistical Office of the European Communities (EUROSTAT) and the International Tropical Timber Organization (ITTO). This joint questionnaire is in response to requests from member countries of all four partner organizations to rationalise our approaches to forest sector data collection and dissemination. It is hoped that this will reduce the reporting burden on countries, improve response rates and increase consistency among forestry statistical publications issued by the various agencies.

The yearbook tables are arranged in three parts. The first part contains information about the most important countries in terms of production, consumption and trade of forest products in 2005. The second part contains the main tables reporting the volume of production, consumption and trade, as well as total and unit values of trade, for every country and type of forest product. The third part contains tables showing the bilateral directions of trade for major product categories.

The tables in the second part present data for the 5 years 2001-2005. These tables have been arranged so that, for any forest product, the tables showing data on production, imports and exports of that product follow one another. Because the product subdivisions used in production and trade statistics differ, the series for certain product categories include only production statistics and for certain others only trade statistics. In general, tables for roundwood are followed by those for sawnwood, panel products, pulp and paper, in that order. Within these groupings, tables showing the total for all products within the group come first, followed by tables for each of the individual products.

The direction of trade tables show the 15 largest exporters and 25 largest importers for each of a number of widely traded forest products. This information, reported for the latest two years, is based on an analysis of data provided by countries through the joint questionnaire and from data drawn from the COMTRADE database of the United Nations Statistics Office. As part of FAO's effort to expand its statistical coverage, more comprehensive direction of trade statistics for countries will also shortly be released in electronic form on the FAOSTAT Internet website.

Forest products and forest product aggregates are defined briefly below. In this section, the forest product aggregates and individual forest products are listed in the order in which they occur in the yearbook. These definitions are based on those contained in: *Classification and definitions of forest products*, FAO, Rome, 1982. Some refinement of product definitions and classifications have been made in this issue in order to meet the needs of all partners of the joint forest products questionnaire and to avoid possible double-counting in some forest product categories. A table is included at the end of this section which shows the composition of product aggregates in production, consumption and trade. In the case of exports and imports, a table is provided at the end of this section that associates the forest product name with the relevant numerical codes used in the United Nations *Standard International Trade Classification* (SITC) system and in the Harmonised System (HS) of the World Customs Organization.

The tables are extracted from FAO's FAOSTAT database on forest products. As such, the tables use computer-generated labels for forest product names and to represent geographic entities. A listing of the computer generated labels for names of continents, countries and areas is displayed in a table towards the end of this section.

As in previous issues, this yearbook includes estimates made by FAO and data obtained from sources other than the official replies to questionnaires. The 5-year series incorporates both official revisions and new information from other sources. Thus, the figures published in earlier issues may have been revised during the preparation of these series. In certain cases, the data provided by countries are stated in different units or systems of measurement from those used in the yearbook. For presentation in the yearbook it has been necessary to convert to a standard set of metric units. The coefficients used for conversion to the metric system are shown in a table at the end of this section. It is hoped that countries will re-examine the estimates and provide FAO with more accurate figures when these appear to be wrong.

One of the areas where statistics are not reported very often by countries is wood fuel. So, for many countries, FAO must estimate wood fuel production. Recently, FAO revised the complete series of wood fuel production figures back to 1960, based on a new model of wood fuel consumption in countries that is believed to produce more reliable estimates. In some countries, these new estimates vary greatly from those that were produced before.

A table of exchange rates for the 5 years of the data series is also included in the yearbook. This table shows the exchange rates used to convert local currency units to a common currency (US$) in the trade value tables. Data for production and trade are rounded to the nearest 1 000 units; volume figures (including apparent net consumption per thousand capita) are in metric tons for charcoal, pulp and paper products and cubic meters for all other products. When the name of a country or area is given without a corresponding numerical entry or printed as "0", it means that quantities are less than 500 units. Entries of less than 500 go into the regional total and world total even though they are not shown at the country level.

Where official statistics were not available an indication is given identifying the use of FAO estimates (F) or data from non-official sources (*). The use of (F) and (*) is displayed on the product tables at the individual product level, e.g. plywood, but not at the aggregate level, e.g. wood-based panels.

To improve these series, readers are encouraged to contact FAO if they find data that is inconsistent with recognised or authoritative data sources or if any of the data does not appear to make sense, even if it has come from an official source. FAO wants to report accurate and timely data and seeks the assistance of all countries to improve the compilation and dissemination of high quality statistics on forest product production and international trade. The contact details for FAO staff dealing with each of the sections of the yearbook are given below. Forest Products and Industry Division, FAO Forestry Department, Viale delle Terme di Caracalla, 00100 Rome, Italy. Fax: +39-06-5705.5137 or +39-06-5705.3945; E-mail: for general comments – FOIM-OIC@fao.org; production statistics – mauro.paolozzi@fao.org; trade statistics – carlos.dricco@fao.org; FAOSTAT access – felice.padovani@fao.org.

SYMBOLS USED IN THE TABLES

CUM	Cubic metre
MT	Metric ton
C	Coniferous
NC	Non-coniferous
F	FAO estimate
*	Unofficial figure
$	United States dollar

PRODUCT NAMES AND DEFINITIONS

General terms and forest product names used in the yearbook are listed below and briefly defined. Where possible the definitions used follow *Classification and definitions of forest products*, FAO, Rome, 1982. Some of these have been refined for use with the joint forest products questionnaire.

General terms

Coniferous
All woods derived from trees classified botanically as Gymnospermae, e.g. fir (*Abies*), Paraná pine (*Araucaria*), deodar (*Cedrus*), ginkgo (*Ginkgo*), larch (*Larix*), spruce (*Picea*), pine, chir, kail (*Pinus*), etc. (These are also generally referred to as softwoods).

Non-coniferous
All woods derived from trees classified botanically as Angiospermae, e.g. maple (*Acer*), alder (*Alnus*), ebony (*Diospyros*), beech (*Fagus*), lignum vitae (*Guaiacum*), poplar (*Populus*), oak (*Quercus*), sal (*Shorea*), teak (*Tectona*), casuarina (*Casuarina*), etc. (These are generally referred to as broadleaves or hardwoods).

Tropical
Tropical timber is defined in the International Tropical Timber Agreement (1994) as follows "Non-coniferous tropical wood for industrial uses, which grows or is produced in the countries situated between the Tropic of Cancer and the Tropic of Capricorn. The term covers logs, sawnwood, veneer sheets and plywood. Plywood which includes in some measure conifers of tropical origin shall also be covered by the definition." The term is only used here in reference to non-coniferous industrial roundwood.

Other
Countries that are not tropical (as defined above). The term is only used here in reference to non-coniferous industrial roundwood.

Removals
The volume of all trees, living or dead, that are felled and removed from the forest, other wooded land or other felling sites. **It includes:** natural losses that are recovered (i.e. harvested), removals during the year of wood felled during an earlier period removals of non-stem wood such as stumps and branches (where these are harvested) and removal of trees killed or damaged by natural causes (i.e. natural losses), e.g. fire, windblow, insects and diseases. **It excludes:** bark and other non-woody biomass and any wood that is not removed, e.g. stumps, branches and tree tops (where these are not harvested) and felling residues (harvesting waste). **It is reported in** cubic metres underbark (i.e. excluding bark). Where it is measured overbark (i.e. including bark), the volume has to be adjusted downwards to convert to an underbark estimate.

Production
The solid volume or weight of all production of the products specified below. **It includes:** the production of products that may immediately be consumed in the production of another product (e.g. wood pulp, which may immediately be converted into paper as part of a continuous process). **It excludes:** the production of veneer sheets that are used for plywood production within the same country. **It is reported** in cubic metres of solid volume in the case of roundwood, sawnwood and wood based panels and metric tons in the case of charcoal, pulp and paper products.

Imports
Products imported for domestic consumption or processing shipped into a country. **It includes:** imports for re-export in some circumstances. **It excludes:** "In-transit" shipments. **It is reported** in cubic metres of solid volume or metric tons and values normally include cost, insurance and freight (i.e. CIF).

Exports
Products of domestic origin or manufacture shipped out of the country. **It includes:** re-exports in some circumstances. **It excludes:** "In-transit" shipments. **It is reported** in cubic metres of solid volume or metric tons and values are normally recorded as free-on-board (i.e. FOB).

Unit values
Unit values have been obtained by dividing the total value of trade by the total volume of trade. The figures for exports represent average FOB values, while those for imports represent average CIF values.

Consumption
Consumption is Apparent Net Consumption, which equals production plus imports minus exports; it can therefore, only be calculated when data are available for all three elements.

Forest product aggregates and names

The names of individual forest products and product aggregates are listed below in the order in which they occur in the tables later on. Separate definitions are not provided for coniferous (C) and non-coniferous (NC) components where the general definition given above applies. Unless indicated otherwise, each forest product category includes both coniferous and non-coniferous components. A summary, showing how all of the product categories and aggregates are linked together, is given in a table at the end of this section.

ROUNDWOOD

Roundwood
- Roundwood (C)
- Roundwood (NC)

All roundwood felled or otherwise harvested and removed. It comprises all wood obtained from removals, i.e. the quantities removed from forests and from trees outside the forest, including wood recovered from natural, felling and logging losses during the period, calendar year or forest year. **It includes:** all wood removed with or without bark, including wood removed in its round form, or split, roughly squared or in other form (e.g. branches, roots, stumps and burls (where these are harvested) and wood that is roughly shaped or pointed. **In the production statistics, it represents the sum of:** wood fuel, including wood for charcoal; sawlogs and veneer logs; pulpwood, round and split; and other industrial roundwood. **In the trade statistics, it represents the sum of:** industrial roundwood - wood in the rough; and wood fuel, including wood for charcoal. **It is reported in** cubic metres underbark (i.e. excluding bark). The statistics include recorded volumes, as well as estimated unrecorded volumes as indicated in the notes.

Wood Fuel, including Wood for Charcoal
- Wood Fuel, including Wood for Charcoal (C)
- Wood Fuel, including Wood for Charcoal (NC)

Roundwood that will be used as fuel for purposes such as cooking, heating or power production. **It includes:** wood harvested from main stems, branches and other parts of trees (where these are harvested for fuel) and wood that will be used for charcoal production (e.g. in pit kilns and portable ovens). The volume of roundwood used in charcoal production, is estimated by using a factor of 6.0 to convert from the weight (MT) of charcoal produced to the solid volume (CUM) of roundwood used in production. **It is reported in** cubic metres underbark (i.e. excluding bark).

Industrial Roundwood-Wood in the Rough
Industrial Roundwood-Wood in the Rough (C)
Industrial Roundwood-Wood in the Rough (NC)
Industrial Roundwood-Wood in the Rough (NC) Tropical
Industrial Roundwood-Wood in the Rough (NC) Other
Roundwood that will be used in the production of other goods and services (except as a source of fuel). **It includes:** all roundwood except wood fuel. **In the production statistics, it represents the sum of:** sawlogs and veneer logs; pulpwood, round and split; and other industrial roundwood. Trade statistics for this category are only divided into coniferous and non-coniferous (and the latter is further subdivided into tropical and non-tropical). **It is reported in** cubic metres underbark (i.e. excluding bark).

Sawlogs and Veneer Logs
Sawlogs and Veneer Logs (C)
Sawlogs and Veneer Logs (NC)
Roundwood that will be sawn (or chipped) lengthways for the manufacture of sawnwood or railway sleepers (ties) or used for the production of veneer (mainly by peeling or slicing). **It includes:** roundwood (whether or not it is roughly squared) that will be used for these purposes; shingle bolts and stave bolts; match billets and other special types of roundwood (e.g. burls and roots, etc.) used for veneer production. **It is reported in** cubic metres underbark (i.e. excluding bark).

Pulpwood, Round and Split
Pulpwood, Round and Split (C)
Pulpwood, Round and Split (NC)
Roundwood that will be used for the production of pulp, particleboard or fibreboard. **It includes:** roundwood (with or without bark) that will be used for these purposes in its round form or as splitwood or wood chips made directly (i.e. in the forest) from roundwood. **It is reported in** cubic metres underbark (i.e. excluding bark).

Other Industrial Roundwood
Other Industrial Roundwood (C)
Other Industrial Roundwood (NC)
Roundwood that will be used outside the forest processing sector for the production of other goods and services (except as a source of fuel). **It includes:** roundwood that will be used for tanning, distillation, match blocks, gazogenes, poles, piling, posts, fencing and pitprops, etc. **It is reported in** cubic metres underbark (i.e. excluding bark).

WOOD CHARCOAL, WOOD CHIPS, PARTICLES AND RESIDUES

Wood Charcoal
Wood carbonised by partial combustion or the application of heat from external sources. **It includes:** charcoal used as a fuel or for other uses, e.g. as a reduction agent in metallurgy or as an absorption or filtration medium. **It is reported in** metric tons.

Wood Chips and Particles
Wood that has been deliberately reduced to small pieces during the manufacture of other wood products and is suitable for pulping, for particle board and fibreboard production, for use as a fuel, or for other purposes. **It excludes:** wood chips made directly (i.e. in the forest) from roundwood (i.e. already counted as pulpwood, round and split). **It is reported in** cubic metres solid volume excluding bark.

Wood Residues
The volume of roundwood that is left over after the production of forest products in the forest processing industry (i.e. forest processing residues) and that has not been reduced to chips or particles. **It includes:** sawmill rejects, slabs, edgings and trimmings, veneer log cores, veneer rejects, sawdust, residues from carpentry and joinery production, etc. **It excludes:** wood chips made either directly (i.e. in the forest) from roundwood or made from residues (i.e. already counted as pulpwood, round and split or wood chips and particles). **It is reported in** cubic metres solid volume excluding bark.

SAWNWOOD

Sawnwood
Sawnwood (C)
Sawnwood (NC)
Wood that has been produced from both domestic and imported roundwood, either by sawing lengthways or by a profile-chipping process and that, with a few exceptions, exceeds 5 mm in thickness. **It includes:** planks, beams, joists, boards, rafters, scantlings, laths, boxboards, sleepers and "lumber", etc., in the following forms: unplaned, planed, grooved, tongued, finger-jointed, chamfered, rabbeted, V-jointed, beaded, etc. **It excludes:** wooden flooring. **It is reported in** cubic metres solid volume.

WOOD-BASED PANELS

Wood-Based Panels
The wood-based panels category is an aggregate category. **In the production and trade statistics, it represents the sum of:** veneer sheets, plywood, particle board, and fibreboard. Until 1995, fibreboard was further split into compressed fibreboard and non-compressed fibreboard. Starting from 1995 the compressed fibreboard category has been disaggregated into hardboard and medium density fibreboard (MDF); and non-compressed fibreboard has been re-labelled as insulating board. **It is reported in** cubic metres solid volume.

Veneer Sheets
Thin sheets of wood of uniform thickness, rotary cut (i.e. peeled), sliced or sawn. **It includes:** wood used for the manufacture of plywood, laminated construction material, furniture, veneer containers, etc. **It excludes:** wood used for plywood production within the same country. **It is reported in** cubic metres solid volume.

Plywood
A panel consisting of an assembly of veneer sheets bonded together with the direction of the grain in alternate plies generally at right angles. The veneer sheets are usually placed symmetrically on both sides of a central ply or core which may itself be made from a veneer sheet or another material. **It includes:** ***veneer plywood*** (plywood manufactured by bonding together more than two veneer sheets, where the grain of alternate veneer sheets is crossed, generally at right angles); ***core plywood*** or ***blockboard*** (plywood with a solid core (i.e. the central layer, generally thicker than the other plies) that consists of narrow boards, blocks or strips of wood placed side by side, which may or may not be glued together); ***cellular board*** (plywood with a core of cellular construction); and ***composite plywood*** (plywood with the core or certain layers made of material other than solid wood or veneers). **It excludes:** laminated construction materials (e.g. glulam), where the grain of the veneer sheets generally runs in the same direction. **It is reported in** cubic metres solid volume.

Particle Board
A panel manufactured from small pieces of wood or other lignocellulosic materials (e.g. chips, flakes, splinters, strands, shreds, shives, etc.) bonded together by the use of an organic binder together with one or more of the following agents: heat, pressure, humidity, a catalyst, etc. **It includes:** waferboard; oriented strandboard (OSB) and flaxboard. **It excludes:** wood wool and other particle boards bonded together with inorganic binders. **It is reported in** cubic metres solid volume.

Fibreboard
A panel manufactured from fibres of wood or other lignocellulosic materials with the primary bond deriving from the felting of the fibres and their inherent adhesive properties (although bonding materials and/or additives may be added in the manufacturing process). **It includes:** fibreboard panels that are flat-pressed and moulded fibreboard products. **In the production and trade statistics, it represents the sum of:** hardboard; medium density fibreboard (MDF); and insulating board. **It is reported in** cubic metres solid volume.

Hardboard
Fibreboard with a density exceeding 0.80 g/cm^3. Before 1995, this product was a component of the compressed fibreboard product category, so data for this product is not available for 1994 and earlier years. **It excludes:** similar products made from pieces of wood, wood flour or other ligno-cellulosic material where additional binders are required to make the panel; and panels made of gypsum or other mineral material. **It is reported in** cubic metres solid volume.

Medium Density Fibreboard (MDF)
Fibreboard of a density exceeding 0.5 g/cm^3 but not exceeding 0.8 g/cm^3. Before 1995, this product was a component of the compressed fibreboard product category, so data for this product is not available for 1994 and earlier years. **It is reported in** cubic metres solid volume.

Insulating Board
Fibreboard of a density not exceeding 0.5 g/cm^3. Before 1995, this product was referred to as non-compressed fibreboard. **It is reported in** cubic metres solid volume.

PULP AND RECOVERED PAPER

Wood Pulp
Fibrous material prepared from pulpwood, wood chips, particles, residues or recovered paper by mechanical and/or chemical process for further manufacture into paper, paperboard, fibreboard or other cellulose products. **In the production and trade statistics, it represents the sum of:** mechanical wood pulp; semi-chemical wood pulp; chemical wood pulp; and dissolving wood pulp. **It is reported in** metric tons air-dry weight (i.e. with a 10% moisture content).

Mechanical Wood Pulp
Wood pulp obtained by grinding or milling pulpwood or residues into fibres, or through refining chips or particles. Also called ground wood pulp and refiner pulp, it may be bleached or unbleached. **It includes:** chemi-mechanical and thermo-mechanical pulp. **It excludes:** exploded and defibrillated pulp. **It is reported in** metric tons air-dry weight (i.e. with a 10% moisture content).

Semi-Chemical Wood Pulp
Wood pulp obtained by subjecting pulpwood, wood chips, particles or residues to a series of mechanical and chemical treatments, none of which alone is sufficient to make the fibres separate readily. It may be bleached or unbleached. **It includes:** semi-chemical wood pulp; chemi-ground wood pulp; and chemi-mechanical wood pulp etc.(named in the order and importance of the treatment during the manufacturing process). **It is reported in** metric tons air-dry weight (i.e. with a 10% moisture content).

Chemical Wood Pulp
Wood pulp obtained by subjecting pulpwood, wood chips, particles or residues to a series of chemical treatments. **It includes:** sulphate (kraft) wood pulp; soda wood pulp; and sulphite wood pulp. It may be bleached, semi-bleached or unbleached. **It excludes** dissolving grades of wood pulp. **It is reported in** metric tons air-dry weight (i.e. with a 10% moisture content). Where detail is available, statistics for the following four component pulps are also given: unbleached sulphite pulp; bleached sulphite pulp; unbleached sulphate pulp; and bleached sulphate pulp.

Unbleached Sulphite Pulp
Bleached Sulphite Pulp
Wood pulp obtained by mechanically reducing pulpwood, wood chips, particles or residues to small pieces that are subsequently cooked in a pressure vessel in the presence of a bisulphite cooking liquor. Bisulphites such as ammonium, calcium, magnesium and sodium are commonly used in this process. **It excludes** dissolving grades of wood pulp. **It is reported in** metric tons air-dry weight (i.e. with a 10% moisture content) and data for two classes: bleached (including semi-bleached); and unbleached, are reported separately.

Unbleached Sulphate Pulp
Bleached Sulphate Pulp
Wood pulp obtained by mechanically reducing pulpwood, wood chips, particles or residues to small pieces that are subsequently cooked in a pressure vessel in the presence of sodium hydroxide cooking liquor (soda pulp) or a mixture of sodium hydroxide and sodium sulphite cooking liquor (sulphate pulp). **It excludes** dissolving grades of wood pulp. **It is reported in** metric tons air-dry weight (i.e. with a 10% moisture content) and data for two classes: bleached (including semi-bleached); and unbleached, are reported separately.

Dissolving Wood Pulp
Chemical pulp (sulphate, soda or sulphite) made from wood of special quality, with a very high alpha-cellulose content (usually 90 percent and over). This type of pulp is always bleached and is readily adaptable for uses other than paper-making. It is used principally as a source of cellulose in the manufacture of products such as synthetic fibres, cellulose plastic materials, lacquers and explosives. **It is reported in** metric tons air-dry weight (i.e. with a 10% moisture content).

Other Fibre Pulp
Pulp manufactured from fibrous vegetable materials other than wood and used for the manufacture of paper, paperboard and fibreboard. **It includes** pulps made from: straw; bamboo; bagasse; esparto; other reeds or grasses; cotton fibres; flax; hemp; rags; and other textile wastes. **It excludes** pulp made from recovered paper. **It is reported in** metric tons air-dry weight (i.e. with a 10% moisture content).

Recovered Paper
Waste and scraps of paper or paperboard that have been collected for re-use as a raw material for the manufacture of paper and paperboard. **It includes:** paper and paperboard that has been used for its original purpose and residues from paper and paperboard production. **It is reported in** metric tons.

PAPER AND PAPERBOARD

Paper and Paperboard

The paper and paperboard category is an aggregate category. **In the production and trade statistics, it represents the sum of:** newsprint; printing and writing paper; and other paper and paperboard. Products in this category are generally manufactured in strips or rolls of a width exceeding 15 cm (36 cm for HS 48.13 and 48.19) or in rectangular sheets with one side exceeding 36 cm and the other exceeding 15 cm in the unfolded state. **It excludes** manufactured paper products such as boxes, cartons, books and magazines, etc. **It is reported in** metric tons.

Newsprint
Uncoated paper, unsized (or only slightly sized), containing at least 60 percent mechanical wood pulp (percentage of fibrous content), usually weighing not less that 40 g/m^2 and generally not more than 60 g/m^2, of the type used mainly for the printing of newspapers. **It is reported in** metric tons.

Paper and Paperboard other than Newsprint
The paper and paperboard category is an aggregate category. **It comprises:** other printing and writing paper; and other paper and paperboard. It only appears in tables showing direction of trade. **It is reported in** metric tons.

Printing and Writing Paper
Paper, except newsprint, suitable for printing and business purposes, writing, sketching, drawing, etc. Made from a variety of pulp blends and with various finishes. **It includes:** papers used for books and magazines; wallpaper base stock; box lining and covering; calculator paper; rotonews; duplicating tablet or block; labels; lithograph paper; banknotes; tabulating card stock; bible or imitation bible paper; stationery; manifold paper; onionskin; typewriter paper; and poster paper, etc. **It is reported in** metric tons.

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